

CO(O)PING:
MENTAL HEALTH IN COOPERATIVE LIVING COMMUNITIES

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ABSTRACT

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The import role of human interaction and social support on well-being and mental health has been researched extensively. There are numerous recorded health benefits to social support and social networks as well as negative health effects for socially isolated individuals. Unfortunately, studies have found increased levels of social isolation over the last few decades. One potential solution to this problem may be found in the cooperative housing movement. In cooperative housing, members share common spaces and responsibilities to provide meals for each other. In order to explore this idea on a more individualized level, a documentary was made to tell the stories of co-op members. The documentary was supplemented with quantitative data in the form of a psychology research study.

This study seeks to explore the relationship between cooperative living and mental health, and whether there are any factors that might predict better success for an individual in the cooperative setting. Co-op members were recruited to participate in recorded interviews and asked to complete a short survey. Results showed that people who used the co-op as a form of social support felt the co-op had a positive effect on their mental health. Individuals higher in agreeableness, conscientiousness, and emotional stability were more likely to report a more positive experience at the co-op. People who found a sense of purpose or were highly engaged in the community also reported more positive experiences at the co-op.

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Co(o)ping: Mental Health in Cooperative Living Communities

Introduction

As society progresses and technology develops, humans are becoming increasingly isolated and detached from their environment. Modern society has fostered growing levels of loneliness, depression, and anxiety (Mcpherson, Smith-Lovin, & Brashears, 2006). Numerous studies have shown the health risks that are associated with social isolation and loneliness (Cohen, 1988; Cole et al., 2007; Pantell et al., 2013). Social isolation refers to the objective lack of social interaction that is available to an individual in their environment. Loneliness, on the other hand, refers to the subjective feeling of lacking social interactions one desires. Additionally, there are demonstrated benefits to social connectedness and community engagement (Fiori & Jager, 2012; Oexle & Sheehan, 2019; Smyth, Siriwardhana, Hotopf, & Hatch, 2015; Swanson, Geller, DeMartini, Fernandez, & Fehon, 2018). Despite these benefits, community engagement in the United States has decreased since the 1950s and 60s. Participation in social networks is decreasing and reliance on the nuclear family has taken precedence (Mcpherson et al., 2006).

One effort to combat this rise in loneliness and social isolation can be found in the cooperative (co-op) housing movement. Student housing co-ops in particular have appeared in major universities across the United States since the 1900s (“The Cooperative Movement”). Although there is not much existing research on housing co-ops specifically, the co-housing movement in Europe has found a number of benefits to communal-style living. Looking at student co-ops in particular, I hypothesize that the nature of cooperative living has many positive

benefits. However, there may be certain elements that contribute to better success in a communal-style environment, such as personality type or level of community engagement.

Evolutionary psychology supports the idea that human beings thrive with larger social networks and more social connections. Buss (2000) argues that large discrepancies between the reality of humans in ancestral times and the reality of modern living lead to unhappiness. Humans evolved to live in small groups or tribes from 50 to 200, but now live in towns of thousands or cities of millions (Dunbar, 1993). Typically, the larger a community grows, the more anonymized and disconnected individuals feel. An extended kin network and support from friends has been replaced by the nuclear family model, which focuses on one partner and their children. Accordingly, the average individual used to have support from multiple generations of family members, as well as cousins, uncles and aunts, etc. in close proximity, whereas now, families tend to be spread across countries as individuals leave their homes to pursue personal goals, leaving less social support and more transient social bonds.

People may also feel particularly disconnected in modern times because of the lack of clarifying events to reaffirm the depth and reliability of a relationship. Despite having many warm interactions, an individual may feel lonely or isolated because they do not live in an environment that fosters deep mutual dependence like ancestral humans did. High intensity scenarios where an individual relies on another in a time of great trouble forms a deep connection and sense of trust. However, modern society tends to be relatively safe and stable. As a result, there may be less confidence in deep connections now than in previous environments forcing mutual dependence (Tooby & Cosmides, 1996). Research confirms this idea. A national survey conducted by Cigna (2018) showed that two out of five Americans felt their relationships

were not meaningful. Mcpherson et al. (2006) showed that people are becoming increasingly isolated in modern times, as reflected in survey data from 1985 and 2004 showing an observable trend of decreasing social connectedness. Social networks have shrunk, with number of confidants decreasing (from three to one). Non-kin ties have also shrunk—there are fewer contacts via neighborhoods and voluntary associations. Instead, confidant networks are centered around spouses and parents. Confidantes that people are comfortable sharing important information with has also decreased from 2.94 in 1985 to 2.08 in 2004.

In contrast, Clark, Loxton, & Tobin (2014) found that self-reported loneliness declined in college students from 1978 to 2009 and in high school students from 1991 to 2012. However, social network isolation, measured by ratings such as having friends to interact with, increased. Students reported having fewer friends to interact with, but also less desire for more friends. It appears that subjective perception of isolation (loneliness) is decreasing while actual social isolation is increasing. One potential explanation for this trend is the advent of larger social networks through technology and social media sites. Social media may give the perception of more friends and less isolation, although reported deep connections are declining (Mcpherson et al., 2006).

The trend towards increased social isolation has negative repercussions on health and well-being. Multiple studies have shown the detrimental health effects to social isolation and loneliness. A meta-analysis conducted by Holt-Lunstad, Smith, & Layton (2010) across 148 studies found that stronger social relationships predicted increased survival rates by 50%. In one longitudinal study by Tanskanen and Anttila (2016), the effects of social isolation and loneliness were examined independently. They found that greater social isolation was correlated with

higher mortality rates, but that loneliness along with social isolation did not have a significant effect on mortality. This indicates that the physically isolating effects of social isolation, regardless of the mental effects associated with loneliness, have tangible negative health effects. Pantell et al. (2013) found social isolation was associated with a mortality ratio similar to that of smoking, and greater than some other traditional clinical risk factors.

Multiple mechanisms have been proposed to explain the increased health risks associated with loneliness and social isolation, including both environmental and biological factors. A relationship between social support and health behaviors has been observed across multiple studies. More socially connected individuals have been shown to have better access to tangible services, and greater health norms. Decreased immune functioning has also been observed in individuals who scored higher on a loneliness scale (Cohen, 1988). Differences in gene expression have been measured in people who varied in subjective social isolation. More socially isolated individuals have been found to have an underexpression of genes related to antiviral resistance, antibody production, and lymphocyte production. Consequently, more socially isolated individuals have a heightened risk of inflammatory disease (Cole et al., 2007).

Social networks and social support also have beneficial effects on physical and mental health. Multiple studies have shown tangible health benefits to having a healthy support system (Fiori & Jager, 2012; Oexle & Sheehan, 2019; Smyth et al., 2015; Swanson et al., 2018). There are two main hypotheses for why these effects occur. The social buffering hypothesis proposes that social support may mitigate, or “buffer” the harmful influences of stressful events. The alternative hypothesis, the direct-effect model, proposes that social support should be beneficial regardless of the presence of stressful events (Cohen & Wills, 1985). The results of one study

showed that receiving too much or too little social support in response to need increased depressive symptoms with greater effect than personality traits, attachment traits, social network size, and perceived stress. Symptoms were highest in individuals who received less support than needed and lowest in individuals who received equivalent support for their need (Rankin, Paisley, Mulla, & Tomeny, 2018). This supports the idea of the social buffering hypothesis—people feel a greater need of support when their stressors are higher, but social support is not always beneficial, as is proposed in the direct-effect model. Other research has differentiated social support from social networks and implied that social networks may be universally beneficial, as in the direct effect model (Berkman, Glass, Brissette, & Seeman, 2000). In light of this evidence, it appears that one way to improve well-being would be to improve social connectedness and support networks. By returning to communities that are more reflective of ancestral tribe dynamics, including extended kin networks and more social support, individuals may be able to combat the health detriments associated with social isolation in modern times.

Since experience in a co-op setting is likely to be highly variable by person, it is also worth exploring whether there may be specific factors that predict greater success in a co-op setting. One potential predictor may be found in personality type. Certain personality types have been found to receive more benefits from social support than others. Evidence suggests that extraverts tend to have higher self-esteem which in turn increases support received from those close to them. Extraverts also perceive more availability of social support and have larger social networks to provide support (Swickert, Rosentreter, Hittner, & Mushrush, 2002; Tan, Krishnan, & Lee, 2016). Research has found that self-esteem has a mediating effect on social support,

explaining why extraverts with higher self esteem also receive greater benefits from social support (Lee & Way, 2019). Agreeableness is also correlated with more perceived social support (Lian & Guo, 2017). Research has also found, in patients with existing depressive symptoms, that those that scored higher in agreeableness showed decreases in depressive symptoms over time with greater social support, but the same was not true for those low in agreeableness (Hoth, Christensen, Ehlers, Raichle, & Lawton, 2007). In response to different types of threats, people high in extraversion and agreeableness tended to increase support seeking (Pow, Lee-Baggle, & DeLongis, 2017).

Although co-ops are a relatively unexplored area of study, the cohousing movement in Europe has captured the interest of some researchers. The cohousing movement developed in Denmark in the 1960s as a form of intentional community (“Timeline of the Cohousing Movement”). These communities are made up of private individual homes facing towards a shared space that contains a common house for community gatherings. An important aspect of this style of living is the balance between private and public life. Individual homes are meant to be self-sustaining, including private kitchens, but common spaces like larger kitchens, office spaces, child spaces, and studios encourage community engagement. There are often also shared outdoor spaces like gardens and parks. Residents share resources like tools and have scheduled shared meals. Research in this area has explored its effects on social support, social capital, collectivist values, and personality trends (Markle, 2014; Sullivan, 2015; Waxman, 2005). Interviews from current members of cohousing communities focused on the numerous social benefits that come from living in a tight-knit community. The interviews revealed that social support manifested in many ways. For example, members reported cooking meals for someone

who suffered a loss and taking care of children whose parents were receiving medical treatment (Markle, 2014). Another study found that connection to community and nature is tied to cohousing structures and practices (Sanguinetti, 2014). In general, however, there is sparse literature looking at the specific effects of the cohousing structure on mental health or the cooperative housing movement in America.

The student cooperative housing movement that is the focus of this study is very similar to cohousing, but in a smaller physical space. Instead of individual houses, members have individual rooms within a common house. One important aspect of the co-op community is labor. Each member is expected to contribute a certain number of hours of labor, typically in the form of chores such as cooking and cleaning. There also tends to be a method of holding members accountable for completing labor, like a three strike system which may result in a membership review or eviction. A community meal plan is often also included in rent costs. Houses typically have at least one meal per day, cooked by the members according to the labor schedule, and common food like snacks and bread. Common spaces such as living rooms, dining areas, and movie rooms are kept clean and organized by cleaning labor shifts. There is also an aspect of democratic decision-making that is very important to the co-op structure. Meeting schedules vary by house, but typically a house meeting will be held every week where house members can propose an agenda item to be brought to the table. Agenda items may involve spending house money, changing a common space in some way, or some other action that may affect house members. This is also where membership reviews are hosted for members that may be causing conflict with the house. The membership may vote to evict a member, or an alternative solution may be proposed by any member, such as make-up labor hours.

This study will be focusing specifically on one Austin co-op, Halstead house. Halstead was originally founded in 1936 as an all-women's co-op. It opened up its membership to men in 1998. Now, any person affiliated with the universities in the Austin area, including Austin Community College, may be housed at Halstead. Halstead is part of the larger College Houses network, which was established in 1964 with the mission to provide affordable co-operative housing for university students. It now owns seven other cooperative houses in the Austin area ("University of Texas Women's Cooperatives Records"). Currently, the maximum house capacity of Halstead is 76 members, but capacity typically ranges from 70-75 members, depending on the semester. This house hosts a mix of international students, with about 20% of the house hailing from countries like France, South Korea, Brazil, or the Czech Republic. Members are required to contribute 4 hours of labor to the house each week. A total of 19 meals are provided each week—lunch, dinner, and snack during weekdays and brunch and snack on weekends. There is also an officer core responsible for maintaining the operations of the house, including a Labor Czar, Food Buyer, Menu Planner, etc.

This study will research the following questions: 1) What are the effects of cooperative living on mental health and general well-being? 2) Are certain personality types more likely to thrive in cooperative settings? 3) Does community engagement or a sense of purpose contribute to success in a cooperative setting? I theorize that the social support network provided by the co-op will improve mental health and that certain personality types, such as extraverts and those high in agreeableness, may perform better in cooperative settings because the structure of a tight-knit community is more compatible with their personality than others. Similarly, people who find a strong sense of community and purpose in the co-op may be more likely to succeed in

the co-op setting. In order to further examine the relationship between mental health and cooperative living, a documentary, titled *Co(o)ping: Experiences in Halstead Cooperative*, was made to explore the stories of individual co-op members (Iliski, 2019). This film sought to give a more personalized and qualitative approach to the research questions.

Method

Recruitment

This study received Institutional Review Board (IRB) approval at the University of Texas at Austin, and took place in Spring 2019. The study required people to participate in an interview and/or complete a survey. Participants in the interview portion of the study were recruited through social networks via word of mouth at the Halstead co-op. They were selected if they were comfortable being recorded speaking about their mental health. Participants who completed the survey were recruited from the entire Halstead population. Active members that were available in common spaces to be approached were most commonly recruited.

Participants

Seven participants completed the interview and survey portion of the study. Five of the seven participants were current members of the co-op and two were former members. Their ages ranged from 20 to 24 (M:22.14). Two men (29%) and five women (71%) were interviewed.

Twenty-nine Halstead members were included for the short survey portion of the study that included no interview. Thirty-six total members, including those who participated in interviews, completed the survey. Thirty-two participants were current members and four were past members. Their ages ranged from 19 to 32 (M:22). 17 men (47%), 17 women (47%), 1 participant that identified as genderqueer (2.8%), and 1 participant that identified as transmasculine

non-binary (2.8%) completed the survey. All survey responses from current and former members were used.

Materials (see Appendix A and Appendix B)

Interviews

The interview portion of the study consisted of a series of pre-prepared questions around the topics of participant background, general well-being, impressions of the co-op, and sense of community and purpose within the co-op (Appendix A).

Surveys

The short survey included demographic questions and three different measures. The demographic questionnaire collected information about gender, age, number of semesters lived in the co-op, and membership status in the co-op. Participants were also asked to rank their experience at the co-op on a scale of 1-10 (with 1 as the most negative experience and 10 as the most positive experience) and give a number for the amount of meaningful friendships they developed while living at the co-op. The measures included were the Ten Item Personality Inventory (TIPI) (Gosling, Rentfrow, & Swann, 2003), the Pemberton Happiness Index (Hervás & Vázquez, 2013), and the UCLA Loneliness Scale (Russell, 1996) (Appendix B).

Ten Item Personality Index. (Gosling, Rentfrow, & Swann, 2003) The TIPI is a condensed version of the Big Five personality measure that ranks participants on extraversion, openness to experience, conscientiousness, neuroticism, and agreeableness. Two items pertaining to each personality factor are included on the survey and respondents are asked to rank themselves on a scale of 1-7. Calculated scores rank subjects on a scale from 1-7 on each of the big Five Personality factors.

Pemberton Happiness Index. (Hervás & Vázquez, 2013) This scale measures happiness as a combination of remembered and experienced well-being. It further divides remembered well-being into general, eudaimonic, hedonic, and social happiness. A score of total happiness can be assigned that ranges from 0 (low happiness) to 10 (high happiness). The experienced happiness scale asks participants to report on five positive events and five negative events that may have happened to them the day before. Two scores, one for positive events and one for negative events, are then calculated and range from 0 (no positive event, no negative event) to 5 (5 positive events, 5 negative events).

UCLA Loneliness Scale. (version 3; Russel, 1996) This is a 20-item measure of overall loneliness. Questions assess how often an individual feels disconnected from others. Items are scored on a 4-point Likert scale. Scores range from 20 (low level of loneliness) to 80 (high level of loneliness).

Procedure

Participants in both the interview and the survey portions of the study provided signed consent prior to completing study procedures. Interviews were videotaped and used to produce a supplemental documentary on the experiences of the interview participants in the co-op (Iliski, 2019). To ensure that the participants felt comfortable, the experimenter interviewed each participant individually in a private room. Before the interview, participants were asked to be as open and honest with their answers as they were comfortable with and were informed that any answer they wished to keep private would not be included in the documentary. Each interview lasted one to two hours on average. The experimenter asked a series of pre-prepared questions over the topics of the participant's background, co-op experience, mental health, and sense of

belonging in the community. Participants did not have access to these questions beforehand.

Other questions were asked in a conversational manner that flowed with the general direction of the interview. For the survey, participants completed measures online via Google survey.

Results

Survey Data

A correlation matrix was run among all variables (see appendix). Higher ratings of the overall co-op experience were positively correlated with agreeableness ($r = .56$), conscientiousness ($r = .59$), and emotional stability ($r = .6$). A higher score on the Pemberton Happiness Index was also correlated with a more positive co-op experience ($r = .63$). While higher ratings of the co-op experience were also positively correlated with extraversion ($r = .19$) and larger reported number of friends ($r = .25$), these relationships were not statistically significant. The number of deep friendships that a member made was not statistically significantly correlated with any of the measured variables, except for a positive correlation with agreeableness ($r = .4$). The average score on the UCLA Loneliness Scale was $M = 48.67$ ($SD = 11.55$). The average score for total happiness on the Pemberton Happiness Index was $M = 6.10$ ($SD = 1.96$). The average for experienced positive scores was $M = 4.08$ ($SD = 1.11$) and the average for experienced negative scores was $M = 2.53$ ($SD = 1.25$).

Interview Data

Interview participants reported experiencing a variety of mental health issues, ranging from depression, anxiety, post-traumatic stress disorder, and anorexia. In discussing the co-op's effect on their mental health, interviewees reported a number of advantages and disadvantages. The reported advantages of the co-op on mental health included the structure of the labor and

food system, the ease of access to a social network, and the positive and affirming community. Reported detriments on mental health were due to perceived loss of privacy and the exhausting nature of interacting with so many people regularly. Members who reported being more engaged with the community also reported better experiences at the co-op. Results are elaborated on in the discussion section.

Discussion

Survey Results

The current study examined the effects of cooperative living on mental health and attempted to identify factors predicting better success in the co-op setting. A higher rating of co-op experience was significantly correlated with three of the big five personality factors. Results showed that members who were higher in agreeableness, conscientiousness, and emotional stability tended to have more positive experiences. Higher extraversion and openness were moderately, but not significantly correlated with a better co-op experience. Members who had overall higher happiness scores from the Pemberton Happiness Index also reported a more positive co-op experience.

The finding that social personality factors such as agreeableness and conscientiousness were correlated with greater success in the co-op setting is consistent with previous literature. Several studies have shown that individuals higher in agreeableness perceive more social support and seek support when needed (Hoth et al. 2007; Lian & Guo, 2017), which may be very important when considering positive experiences at a co-op. Individuals higher in conscientiousness may also find more success in the co-op setting because they take better advantage of the structure and resources provided to them in the co-op. They may perform labor

more reliably, encountering less problems with consequences for missing labor and interpersonal issues. However, this is also somewhat surprising considering the more spontaneous and flexible nature of social interactions in the co-op setting. More emotional stability, or less neuroticism, is associated with less negative emotions and emotional volatility, thus it is also unsurprising that people lower on neuroticism report having a better co-op experience. This may just be due to them having less negative experiences overall, inside and outside of the cooperative setting.

The non-significant positive correlation between extraversion and co-op experience was surprising considering the literature showing extraverts tend to receive greater benefits from social support (Pow, Lee-Baggley, & DeLongis, 2017; Swickert et al., 2002; Tan et al., 2016). One potential explanation for this trend may be that extraverts tend to receive more benefits because it is easier for them to make friends and receive social support. However, in the co-op setting, extraversion is not necessary to make friends. More introverted members can interact with housemates in a more intimate, one-on-one setting rather than at large social gatherings, making it easier to form bonds that translate to more social support. One aspect of the co-op setting that may be beneficial for introverts in this way is that they are free to socialize in the kitchen or a common space when they feel comfortable, and return to the privacy of their room, which is only feet away, whenever they feel exhausted or overwhelmed. The in-between times of the co-op when the common spaces have a lull in activity, such as during class or in the mornings, allow people who are more shy or introverted to socialize with their fellow housemates in a more controlled setting.

It may be expected that people who are higher on openness to experience would have a better experience at the co-op since it exposes you to a variety of unique experiences, but this

relationship was not statistically significant. One explanation for this finding could be that people low on openness don't actively dislike these unique experiences, they just tend not to seek them out. Accordingly, living in the co-op may expose people to experiences that they might enjoy, just not seek out without the existing structure of the co-op. The non-significant relationship may also be due to the limited variance; very few respondents scored low on openness. With a greater variety of scorers on the lower end of openness, an effect may have emerged. It is possible that this group naturally selects for itself—the nature of cooperative living may appeal to people who are more open to experiences prior to entering the co-op.

Interview Results

Overall themes reported from the interview portion of this study may not reflect universal trends in co-op populations, but rather reflect the individual experiences of the members, and raise many interesting points that may be explored further with more quantitative data. Interview responses showed that many of the participants believed the co-op had a positive impact on their general mood and mental health. The most common themes in explaining this trend were the supportive and positive nature of the community and the structure of cooperative living.

Although the survey data did not specifically assess the relationship between co-op living and mental health disorders, the topic came up often in the interviews. Many people felt that the co-op had a positive impact on their experience with depression and social anxiety. There are aspects of the co-op that differ from merely occupying the same space as many people, such as in a dorm, hostel, or house. The co-op also includes shared responsibility for maintaining the cleanliness of the house, cooking meals for each other, and democratic decision making. The element of structured meals and labor was particularly beneficial for people suffering from

depression. Having prepared meals was also an advantage. Multiple interviewees mentioned unhealthy eating habits and even weight loss when they lived alone because depression made it very difficult to motivate themselves to cook meals and clean dishes:

When I leave the co-op for interim, for example, I just like will stop eating because for me like when I get really depressed I don't have a lot of energy I don't wanna do much. I don't wanna like go out and buy the food and make the food and I'm usually just not hungry to begin with and so I end up losing significant amounts of weight.

This pattern of avoidance is not likely to occur in the co-op because the responsibility of performing labor with tangible consequences if skipped (possible eviction) was a good motivator, and meals were provided at a regular schedule.

Another feature that participants praised was the social nature of the co-op. For those suffering from social anxiety, the constant exposure to friendly and supportive people was a great help in overcoming their fears:

So, whenever I go downstairs or I go to the kitchen and I have to talk to five different people, that's five different opportunities for me to try to work through like my social anxieties and try to show myself like I can talk to people, I just need to like be more confident or I need to worry less or I need to do you know x, y, z. And each interaction I have with a different person around the co-op helps and I don't think I would get that living in an apartment because I would go to my kitchen and there'd be nobody else there and there'd be no learning experience.

In this way, the co-op may serve as a form of exposure therapy that members have a degree of control over. Members may choose to avoid common spaces when they are exceptionally

crowded, but expose themselves to social interaction when there are only a few other people in a common space. All interviewees who mentioned having social anxiety said that the co-op had a beneficial effect on their anxiety. A combination of the structure and the social aspect of cooperative living was very beneficial for one interviewee who suffered from anorexia:

I think if I was living in an apartment by myself and I had no one to hold me accountable I could very easily fall into anorexic tendencies and not eat for days and- because for me, you know, when you've been dealing with this issue since you were a child, it's more normal to not eat than to eat... but living at the co-op, like, if I'm in the kitchen and I see people make food that subconsciously tells me like- oh, you haven't had lunch? Now it's time for you to have lunch... so that makes it easier... because you see people around you who have a very normal relationship with food and that influences you to have a normal relationship with food.

This participant praised being exposed to other people's habits as an advantage not only for their anorexia, but also for their mental health in general. The participant stated that people in the co-op were open and honest about issues they've experienced with their mental health, which in turn inspired the participant to be more cognizant and active in addressing their own struggles.

Though most interviewees reported positive experiences, some described negative effects that the co-op structure had on their mental health. For some, the number of members in the house was actually a source of conflict rather than a benefit and added to the stressors harming their mental health. One person described that living with 75 other members was especially draining when experiencing a depressive episode. This respondent felt a social pressure to display a positive demeanor in common spaces around people, which was very difficult to

maintain when actions such as getting out of bed and walking to campus were draining. An apartment setting with 3 or 4 other roommates sounded much more appealing and manageable to this subject in the context of intense depressive episodes:

So you are avoiding campus, but then your home has 75 people in it. So either you are in your room by yourself, which is not healthy, or you're in a space with at least 30 other people at the same time and you have to conjure up whatever little energy you have left to put on a smile on your face and act like everything is fine and be positive because negativity is not socially acceptable.

Another negative issue raised was the interpersonal issues that can arise when living with large numbers of people in close proximity. One participant reported that they had interpersonal issues with members in the house that escalated to a point that felt impossible to resolve. In response to that situation, the interviewee retreated to their room to avoid having to see the members they had issue with in the common spaces of their home. This increased their sense of isolation and loneliness, and they reported feeling confined in their own home: *"It's like- it's kind of a prison in that it's your own home but you're under house arrest because of like the other outside influences that are being a detriment to your health."*

Almost all interviewees reported that the co-op impacted and changed their life in some way, sometimes dramatically. A number reported that it helped them find a sense of purpose or drive that did not exist before, even those who described a more negative experience at the co-op. Rising to the requirements of an officer position gave many a sense of confidence, leadership, and organizational skills. Others felt that the community and environment of the co-op affirmed their creativity and desire to interact with people. In general, the members that

strongly emphasized finding their sense of purpose in the co-op were the ones that had the most positive experience in the co-op and had the most affirming things to say about their mental health in the co-op. This may be to be expected, considering the literature supporting the relationship between purpose and positive mood. Finding a sense of purpose has also been associated with health benefits and an overall higher sense of well-being (Hill, Sin, Turiano, Burrow, & Almeida, 2018).

Overall Conclusions

Findings from the survey data were often supported by interview responses. Survey data showed that extraversion was not significantly correlated with a more positive co-op experience, and I theorized that this may be due to the ease of access co-ops give introverts to social networks. This idea was supported by the interviews. Many introverted and socially anxious interviewees reported that the co-op setting dramatically improved their ability to connect and interact with people. They reported having more friends and more support in the co-op environment than they ever had before, emphasizing how easy it was to make friends at the house.

Most respondents are happy that they moved in and feel that this environment was more positive than previous ones. One qualifier was whether or not people felt connected to the community—in the interviews, people who made more deep lasting friendships tended to say the co-op had a better effect on their mental health. Interviewees that reported forming deeper connections with fellow members and feeling that their housemates acted as a form of social support for them had much more positive experiences at the co-op and tended to report more benefits on their mental health. However, this is not necessarily reflected in the survey data—

there were not significant correlations between any of the variables measured and number of friendships, except for a positive correlation with agreeableness. This may be partially attributable to the somewhat vague nature of the question: “How many friendships have you developed at the co-op that you would consider deep or meaningful?” Scores on this question ranged from 50 to 0, and had a median score of 5.5. The large variability in these responses may be due to the definition of deep and meaningful friendships varying between person. The positive correlation with agreeableness is not surprising considering that agreeableness has a social aspect to it and agreeable people may find it easier to make more friends.

The crux of the idea that the co-op may be beneficial lies in the fact that it provides a larger social support network for people than the traditional nuclear family or small apartment/house-style living common today. However, the relationship between mental health and social support is nuanced. A larger social network size, such as in the case of the co-op, may not necessarily predict better social support, which has observed effects on mental health. Individuals who do not utilize the co-op as a form of social support may not receive mental health benefits from living in one, and may actually suffer greater stressors. People who have a more negative experience may be surrounded by a social network that they are unable to unwilling to reach out to for support, possibly causing an even worse sense of isolation or loneliness. However, individuals who take advantage of the larger social network as an extended source of social support may have better mental health effects. This aligns with the existing literature on the beneficial effects of larger social networks and social support (Berkman et al., 2000; Cohen, 1988; Fiori & Jager, 2012; Oexle & Sheehan, 2019; Smyth et al., 2015; Swanson et al., 2018). Individuals who reported that the co-op was not an effective support system for

them may not have received the level of social support that met their needs, which has been shown to increase depressive symptoms (Rankin et al., 2018). This pattern was reported by one interviewee who had a fairly negative experience at the co-op—they were unwilling to seek support in the environment around them and instead further detached themselves from the co-op's social network.

The survey data and interview responses reflected a varied and complex relationship between cooperative living and mental health. The cooperative setting was not universally positive for everyone, but certain personality types seem to thrive better in such a setting—more agreeable, conscientious, and emotionally stable individuals. Willingness to seek social support from house members also appears to be correlated with a more positive reported experience at the co-op. Additionally, interviews reveal that the social aspect of cooperative living was not the only factor that benefitted mental health. The structure of the co-op system itself, such as shared responsibility for the house and structured meals and labor, was also beneficial for participants. Thus, easier access to a larger social support network and the structured nature of cooperative living may be one way to improve mental health for certain individuals.

Limitations and Future Directions

Some limitations to this study exist. Both the survey data and the interviews are subject to self-report bias. Although attempts at random selection were made, these results may still be subject to selection bias. In particular, the participants selected for the interview portion of this study tended to be individuals who were familiar and comfortable with the interviewer due to the sensitive nature of the topic. The larger population that took the surveys but were not interviewed were approached at random within the house, but these participants tended to be members that

were active in common spaces due to ease of access. This may potentially bias the results of the surveys because there is a small but existent population of Halstead members that do not participate in house culture very frequently—either by not attending meals and/or not occupying common spaces. These “ghost members” may experience the co-op differently than those who actively participate in the community.

These data are also limited as they were based on one co-op, Halstead. Each co-op within the Austin community, and more broadly throughout the country, has its own unique culture that differs from house to house. The nature of relationships among members in different houses may vary, making the sense of community and belonging reported here reflective of the Halstead house, but not necessarily of other co-op houses. While we might expect our findings to be generalizable to co-ops with similar structure (i.e., the cooperative style of living that requires members to interact and live in close proximity), this conclusion cannot be definitively drawn from our data. Thus, one potential avenue for future research lies in exploring whether these trends are reflected in the broader co-op community. Further research into the differences between house cultures as well as house style may also be interesting to explore. The sense of community between an 18 person house versus a 70 person house may be quite different; aspects of house culture such as sense of cooperation, diversity, and strictness of labor may also change as a function of size and related factors affecting how members in a house connect.

Another interesting direction for future research would be to assess the relationship between loneliness scores and happiness scores for students across a variety of housing settings. Since college students tend to report higher loneliness and social isolation (Rokach, 2000; Victor & Yang, 2012), it may not be accurate to compare our results with national averages, but future

studies may look to evaluate loneliness and happiness scores of students living in co-ops versus dorms, apartments, or in Greek life housing. Finally, it will be important to evaluate these issues in other co-op populations, such as adults, to further understand the generalizability of these results.

Many interview participants reported that the co-op had positive effects on their mental health and existing mood disorders, but these subjective reports may not reflect actual objective improvements in clinical disorders. The relationship between mental health and cooperative living is tentative and should be supported with further quantitative research. The cooperative movement is an ever-growing community that continues to be largely unexplored. This unique style of living may pose as one solution to the sense of disconnection and isolation that many people feel today and thus deserves further attention and research.

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Appendix A:

Sample Interview Questions

Background Information

- What's your name/how long have you lived here?
- Did you grow up in a large family setting? Were you part of any other form of large community growing up?
- How long have you lived on your own?
- What were your experiences like before living at the co-op? How would you describe your general mood?
- Did you have a support system prior to moving into the co-op? How has it changed since you moved in to the co-op?
- Had you experienced mental health issues prior to living in the co-op? Did you reach out to anyone?

Co-op Questions

- How would you describe a co-op/ what is a co-op to you?
- Where did you live before moving in to the co-op?
- How did you hear about the co-op?
- Why did you choose to move into the co-op? What were the most important reasons for your choice of this community?
- What were your expectations before moving in? How has your experience at the co-op related to these expectations?
- What do you think the benefits of co-op living are? What about the detriments?
- How long have you lived at the co-op? How does your experience your first year at the co-op compare to now? How has your general happiness or well-being changed over that period?
- Can you describe the culture of Halstead (in 5 words?)
- How positive has your co-op experience been?/how well are you getting along?

General Well-being

- Have you experienced any mental health issues since moving into the co-op? And have you reached out to anyone about them? Were they from the co-op?
- How would you describe your general mood after moving in to the co-op?
- How have your happiness levels changed since moving into the co-op?
- Has the co-op made a significant impact on your mental health or mood?
- Did you feel lonely or isolated before living at the co-op? Do you ever feel lonely or isolated at the co-op now?
- How does this living environment compare to your previous ones? Are you happier?

Community/Purpose

- Did you have difficulty finding a community or social network before moving into the co-op?
- How easy did/do you find it to make friends at the co-op?
- How many friendships have you developed at the co-op that you would consider “deep”? Do you feel like those friends would be there when times get rough? How many do you think are superficial friends that wouldn’t help through hard times?
- How has the co-op acted as a support system for you? Or has it not?
- How has living in a co-op impacted or changed your life?
- Has the co-op helped you find a greater sense of purpose in life? If so, how has belonging in the co-op community fostered that sense of purpose?

Appendix B:
Sample Survey

Demographic Questions

Gender: _____

Age: _____

Are you a current member of Halstead? (Y/N) _____

How many semesters have you lived at the co-op? _____

On a scale of 1-10, how positive has your co-op experience been? _____

How many friendships have you developed at the co-op that you would consider deep or meaningful? (please enter a number) _____

Ten-Item Personality Inventory

Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

- 1 = Disagree strongly
- 2 = Disagree moderately
- 3 = Disagree a little
- 4 = Neither agree nor disagree
- 5 = Agree a little
- 6 = Agree moderately
- 7 = Agree strongly

I see myself as:

- 1. _____ Extraverted, enthusiastic.
- 2. _____ Critical, quarrelsome.
- 3. _____ Dependable, self-disciplined.
- 4. _____ Anxious, easily upset.
- 5. _____ Open to new experiences, complex.
- 6. _____ Reserved, quiet.
- 7. _____ Sympathetic, warm.
- 8. _____ Disorganized, careless.
- 9. _____ Calm, emotionally stable.
- 10. _____ Conventional, uncreative.

Pemberton Happiness Index

Using the following scale from 0 to 10, with 0 being total disagreement and 10 being total agreement, please rate the extent to which you agree with the following statements.

Totally disagree 0 1 2 3 4 5 6 7 8 9 10 Totally agree

- (1) I am very satisfied with my life
- (2) I have the energy to accomplish my daily tasks
- (3) I think my life is useful and worthwhile
- (4) I am satisfied with myself
- (5) My life is full of learning experiences and challenges that make me grow
- (6) I feel very connected to the people around me
- (7) I feel able to solve the majority of my daily problems
- (8) I think that I can be myself on the important things
- (9) I enjoy a lot of little things every day
- (10) I have a lot of bad moments in my daily life*
- (11) I think that I live in a society that lets me fully realize my potential

Section B

Please mark which of the following happened to you *yesterday* (YES / NO):

- (1) Something I did made me proud
- (2) At times, I felt overwhelmed
- (3) I did something fun with someone
- (4) I was bored for a lot of the time
- (5) I did something I really enjoy doing
- (6) I was worried about personal matters
- (7) I learned something interesting
- (8) I gave myself a treat
- (9) Things happened that made me really angry
- (10) I felt disrespected by someone

UCLA Loneliness Scale

Instructions: The following statements describe how people sometimes feel. For each statement, please indicate how often you feel the way described by circling one of the responses below.

Here is an example:

How often do you feel happy?

If you never felt happy, you would respond “never”; if you always feel happy, you would respond “always.”

1. How often do you feel that you are “in tune” with the people around you?

Never

Rarely

Sometimes

Always

2. How often do you feel that you lack companionship?

Never

Rarely

Sometimes

Always

3. How often do you feel that there is no one you can turn to?

Never

Rarely

Sometimes

Always

4. How often do you feel alone?

Never

Rarely

Sometimes

Always

5. How often do you feel part of a group of friends?

Never

Rarely

Sometimes

Always

6. How often do you feel that you have a lot in common with the people around you?

Never	Rarely	Sometimes	Always
-------	--------	-----------	--------

7. How often do you feel that you are no longer close to anyone?

Never	Rarely	Sometimes	Always
-------	--------	-----------	--------

8. How often do you feel that your interests and ideas are not shared by those around you?

Never	Rarely	Sometimes	Always
-------	--------	-----------	--------

9. How often do you feel outgoing and friendly?

Never	Rarely	Sometimes	Always
-------	--------	-----------	--------

10. How often do you feel close to people?

Never	Rarely	Sometimes	Always
-------	--------	-----------	--------

11. How often do you feel left out?

Never	Rarely	Sometimes	Always
-------	--------	-----------	--------

12. How often do you feel that your relationships with others are not meaningful?

Never	Rarely	Sometimes	Always
-------	--------	-----------	--------

13. How often do you feel that no one really knows you well?

Never	Rarely	Sometimes	Always
-------	--------	-----------	--------

14. How often do you feel isolated from others?

Never	Rarely	Sometimes	Always
-------	--------	-----------	--------

15. How often do you feel that you can find companionship when you want it?

Never	Rarely	Sometimes	Always
-------	--------	-----------	--------

16. How often do you feel that there are people who really understand you?

Never	Rarely	Sometimes	Always
-------	--------	-----------	--------

17. How often do you feel shy?

Never	Rarely	Sometimes	Always
-------	--------	-----------	--------

18. How often do you feel that people are around you but not with you?

Never	Rarely	Sometimes	Always
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19. How often do you feel that there are people you can talk to?

Never	Rarely	Sometimes	Always
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20. How often do you feel that there are people you can turn to?

Never	Rarely	Sometimes	Always
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